ABSTRACT

A system facilitates the design and implementation of large-scale applications, such as Internet Services and Websites, for distributed computer systems, such as server data centers, Internet data centers (IDCs), Web farms, and the like. The system has a modeling system and a deployment system. The modeling system permits developers to architect the hardware and software used to implement the applications in an abstract manner. The modeling system defines a set of components used to describe the functionality of an application. The model components are arranged and interconnected to form a scale-independent logical model of the application. Once a logical model is created, the deployment system uses the logical model to automatically deploy various computer/software resources to implement the application. The deployment system converts each of the model components into one or more instances that correspond to physical resources.